

REMARKS

The official action of 4 September 2009 has been carefully considered and reconsideration of the application as amended is respectfully requested.

The claims have been amended to remove the bases for the rejections under 35 USC 112, first and second paragraphs, and more clearly to distinguish over the cited art based on the disclosure in the specification as filed at, for example, page 1, lines 9-11; page 2, lines 12-19 and page 3, lines 8-14 and lines 27-29. These portions of the specification make clear that the claimed invention imparts stability to an otherwise labile aroma chemical, 2-acetyl-1-pyrroline, and in so doing obviates the drawbacks of the prior art processes described in the Background portion of the specification. Specifically, the specification makes clear that the subject compound is unstable in its pure form, as evidenced by its turning red when not in solution (specification at page 2, lines 12-19), and that this caused drawbacks in the prior art attempts to use the compound as a flavorant, including the drawback that the compound had to be prepared in its salt form and released **prior to use** (specification at page 3, lines 8-24). The specification also makes clear that the claimed invention obviates this drawback among others (specification at page 3, lines 26-29) such that the claimed composition is not in a form that “needs to be released prior to use” (i.e., **prior to use**, it can be maintained in the same form as it is in use).

The specification thus conveys with reasonable clarity to those of skill in the art that, as of the filing date sought, Applicants were in possession of the subject matter now claimed, i.e., a form of 2-acetyl-1-pyrroline that is stabilized such that it does not need to be (a)

stored in solution to prevent it from degrading (turning red) or (b) kept in salt form and released prior to use to have utility as a flavorant for imparting a basmati aroma to a foodstuff. This being the case, the specification provides written descriptive support for the subject matter now being claimed under the provisions of 35 USC 112, first paragraph, as clearly as if this were described in the specification verbatim. See MPEP 2163.02 ("The subject matter of the claim need not be described literally (i.e., using the same terms or in haec verba) in order for the disclosure to satisfy the description requirement.").

In addition, claim 1 has been amended to include the "consisting essentially of" transitional, which limits the scope of a claim to the specified steps "and those that do not materially affect the basic and novel characteristic(s)" of the claimed invention. MPEP 2111.03. As discussed above, the specification makes clear that one of the basic and novel properties of the invention is that it eliminates the need for the steps of preparing the flavorant in a salt form from which it needs to be released prior to use. The "consisting essentially of" transitional thus excludes any method step that would require preparation of the claimed flavorant in salt form, as is the case in the Buttery reference (see discussion below).

The claims stand rejected under 35 USC 103(a) as allegedly being unpatentable over Partanen et al in view of Buttery et al and Wright or Gasser. The claims also stand rejected under 35 USC 103(a) as allegedly being unpatentable over Leshik in view of Buttery et al and Wright or Gasser. Applicants respectfully traverse these rejections.

The Examiner contends that all of the claimed flavor, additional components, and spray-drying were known in the art at the time the invention was made and that it would

have been obvious for one of skill in the art to combine these elements to provide the allegedly predictable result of a spray-dried-2-acetyl-1-pyrroline with the reasonable expectation of a suitable preserved flavor molecule. Applicants respectfully disagree and submit that a proper examination of the references shows that they do not provide either predictability or a reasonable expectation of success for the invention as claimed.

To understand this, one need look no further than the Buttery reference which teaches those of skill in the art that APR is **not** stable in its pure state (“turns red on standing”) such that it **must** be maintained in salt form prior to use and can only be released at such time as the salt is to be used (Buttery at column 3, lines 13-48). In other words, Buttery teaches away from the possibility of maintaining APR in such pure state prior to use. In contrast, the claims as amended require that the claimed method provides sufficient stability to the final product such that it is capable of use in the same (pure) form in which it is maintained prior to use.

The other cited references do not make it predictable that the claimed steps could produce an APR flavorant with a stability as claimed. Thus, Partanen et al make clear that their study with respect to the effectiveness of microencapsulation is peculiar to the chemical compounds investigated in their study (limonene and carvone). Similarly, Leshik makes clear that his patent pertains only to the colorant, curcumin, described therein. Leshik at column 2, lines 13-17 (“The present invention provides a stabilized dry yellow colorant based on curcumin which is stable under storage conditions in the presence of dry food mixes regardless of pH.”). There is no basis in the record for a prediction of stability by encapsulation of the claimed flavorant. To the contrary, as described in the present

specification at page 2, lines 12-15:

“The compound is a colorless liquid when freshly prepared and purified. It needs to be immediately protected from light and air and preserved in sealed vials under vacuum at temperatures below -20°C. **Even at these conditions it is reported to turn to red on storage and eventually become darker on longer storage.**” Emphasis added.

In view of the fact that storage of the claimed compound in sealed vials under vacuum and low temperature conditions do not provide for its stability, how could it be predicted that encapsulation and spray drying methods practiced with completely different compounds would provide stability for the claimed compound, especially since the methods do not purport to provide complete sealing? See, e.g., Wright reference at page 16, first full paragraph (describing the **semi-permeable** shell formed by spray drying). If the Examiner has evidence to support the proposition that one of skill in the art would expect the methods used for stabilizing the limonene, carvone and curcumin compounds of the cited art to stabilize the claimed compound, Applicants respectfully request that the same be produced. See MPEP 2144.03(C). Otherwise, Applicants respectfully submit that the rejections should be withdrawn for lack of a reasonable expectation of success. See MPEP 2143.02 (recognizing that the prior art can be modified or combined to reject claims as prima facie obvious only as long as there is a reasonable expectation of success).

In view of the above, Applicants respectfully submit that all rejections and objections of record have been overcome and that the application is now in allowable form.

An early notice of allowance is earnestly solicited and is believed to be fully warranted.

Respectfully submitted,



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